

REMARKS

Applicant is filing this Response within the shortened statutory period. Consequently, Applicant believes that no fee is due with this filing; however, if a fee is due please charge Deposit Account No. 502295.

Claims 1-4, 7, 8, 15 and 16 were presented for examination. The Office Action mailed August 22, 2007 objects to claims 3 and 4, and rejects claims 1-4, 7, 8, 15 and 16. Claims 1-4, 7, 8, 15 and 16 remain pending in the application.

Objection to Claims 3 and 4

The Office Action objects to claims 3 and 4 due to informalities. More specifically, the Office Action states that the acronyms UML and 3GL need to be spelled out one in the claims. Applicant herein amends claim 3 to replace “UML” with “Unified Modeling Language.” Applicant herein amends claim 4 to replace “3GL” with “third-generation language.” Applicant submits that these amendments overcome the objections to claims 3 and 4.

Rejection of Claims 1-4, 7, 8, 15 and 16 under 35 U.S.C. §102(b)

The Office Action rejects claims 1-4, 7, 8, 15 and 16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,851,107 to Coad et al. (hereafter “Coad”). Applicant respectfully traverses the rejection because the cited reference does not teach every element of Applicant’s claimed invention.

Development of software code is often based on the use of a software modeling tool. A software model is developed and code is then generated from the model. The code is modified and the changes in the code are used to transform the software model. This back and forth process can be repeated until a final version of the code is established. Changes can be made to the software model and to the code in parallel, that is, concurrently. Changes made to the software model can conflict with changes made to the code, and changes made to the code can conflict with changes made to the software model.

Applicant's invention relates to a method for synchronizing concurrently modified interdependent semi-derived artifacts (SDAs). An SDA is a file that is generated in part through a transformation and in part through direct editing. In one embodiment, a code file (the SDA) is generated by a forward engineering operation from a software model (the "primary artifact") and by the editing of a programmer. In an alternative embodiment, the code file is the primary artifact and the software modeling file is the SDA when a reverse engineering operation is used. The software model and code file are linked as a primary artifact and SDA, respectively, or as an SDA and primary artifact, respectively, according to the particular engineering operation that is applied. Thus the software model and code file are interdependent SDAs (paragraphs [0020] and [0021]).

In some software development activities as described above concurrent changes are made to the code and the software model. Applicant's claimed method enables the synchronization of the SDAs even though concurrent changes have been made to the SDAs after the most recent synchronization. Representative claim 1 of Applicant's invention recites performing reverse and forward engineering operations and a merging operation using versions of first and second artifacts that are interdependent and concurrently modified.

Coad discloses a method which allows a software developer to simultaneously view a graphical display and a textual display of source code. The described software development tool simultaneously reflects any modifications to the source code to both the graphical display of the source code and the textual display of the source code. Although Coad discloses application of a reverse engineering process, there is no description of a forward engineering process. Moreover, Coad does not address the problem overcome by Applicant's invention, namely, how to synchronize interdependent artifacts that have been separately modified. Notwithstanding, there are other fundamental differences between the subject invention as recited in Applicant's claims and the subject matter disclosed by Coad. According to Coad, all modifications are made directly to the source code. A transient meta model 200 generates responsive modifications to both the graphical display representation 204 and textual display representation 206 of the code that are based on the modifications to the source code 202. (See generally FIG. 2 and col. 4, line 38 to col. 5, line 3.) Importantly, changes that are made to

either the graphical display 204 or the textual display 206 result in actual modification of the source code 202 via an incremental code editor 208 (col. 4, lines 54-58). The transient meta model 200 then generates responsive modifications to the displays 204, 206 based on the modifications made to the source code (col. 4, lines 58-60).

If the source code 202 in Coad is construed to be an artifact, there is no second artifact that is interdependent with the source code and concurrently modified with the source code. Conversely, if the graphical display representation 204 or the textual display representation 206 are construed to be an artifact that is interdependent with the source code 202, neither display 204 or 206 is modified in parallel, i.e., concurrently modified, when the source code 202 is modified. Moreover, if the graphical display 204 and the textual display 206 were modified at the same time based on the source code changes, the graphical and textual displays 204 and 206 are not interdependent. Stated otherwise, neither display 204 or 206 is dependent on or derived from the other display 206 or 204. Thus Coad does not teach or suggest first and second artifacts that are interdependent and concurrently modified.

As Coad does not teach or suggest every limitation in representative claim 1, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. 102(b) be withdrawn. Independent claims 7 and 15 include similar language to representative claim 1 and therefore Applicant respectfully requests that their rejection under 35 U.S.C. 102(b) be withdrawn for at least those reasons provided above with respect to claim 1. Claims 2-4, 8 and 16 depends directly or indirectly from independent claims 1, 7 and 15, and incorporate all of the limitations of the respective base claim. Therefore Applicant submits that dependent claims 2-4, 8 and 16 are also patentably distinguishable over the cited reference for at least those reasons provided above in connection with claim 1, and Applicant respectfully requests that the rejection under 35 U.S.C. 102(b) against claims 2-4, 8 and 16 be withdrawn.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

In view of the remarks made herein, Applicant submits that the application is in condition for allowance and request early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicant's representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.

Respectfully submitted,

Date: November 16, 2007
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